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NEWSLETTER

Indiana State Department of Health

Epidemiology Resource Center
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Indianapolis, IN 46204
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The Impact of Tobacco on the Health and Welfare of Indiana Residents

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Tobacco smoke is a known human carcinogen. Nicotine, the main active ingredient in tobacco products, is more toxic than strychnine. The use of tobacco products can lead to death; yet more than a quarter of Indiana adults (27.4%) are current smokers.

Tobacco smoke is a complex mixture of chemicals that includes poisons, such as hydrogen cyanide, and chemicals, which can lead to developmental or reproductive toxicity, such as nicotine, cadmium, and carbon monoxide. More than 50 different cancer-causing substances have been identified in tobacco smoke including arsenic, benzene, formaldehyde, vinyl chloride, lead, and DDT. Usage of some of these chemicals has been banned in the United States (US) and many other developed countries; all are heavily regulated. Yet tobacco is widely available and may be purchased legally by any adult.

History of Recognized Health Effects

The devastating health effects of tobacco use have not always been as well recognized as they are today. However, warnings about the health effects of tobacco are not new. In the 1600's, King James I of England and Samuel Pepys wrote of tobacco's dangers. In 1791 in England, John Hill performed the first known clinical study of tobacco effects and warned snuff users of the risk of nasal cancers. In 1795, Samuel von Soemmering of Maine reported on cancers of the lip in pipe smokers. In the 1800's, the journal *Lancet* published a running debate on the health effects of tobacco and the Tennessee Supreme Court upheld a ban on cigarettes.

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The first half of the twentieth century was marked by a large increase in the percentage of the population smoking cigarettes, due largely to the introduction of young men to the habit during World Wars I & II. There was a subsequent increase in the lung cancer death rate from 0.6/100,000 US population in 1914 to 15.0/100,000 in 1950 and 59.3 by 1990. During this period, scientific studies linking smoking and cancer continued to be published but were not widely disseminated to the general population. The first official position taken by an agency of the US government came from the Public Health Service (PHS) on July 12, 1957 when Surgeon General Leroy E. Burney issued the "Joint Report of Study Group on Smoking and Health", stating that "prolonged cigarette smoking was a causative factor in the etiology of lung cancer." In January, 1964 the first report of the US Surgeon General, "Smoking and Health: Report of the Advisory Committee to the Surgeon General of the Public Health Service" was issued. In 1965, Congress passed the Federal Cigarette Labeling and Advertising Act requiring the Surgeon General's warning on cigarette packs and, in January 1966, the health warnings began. In 1971, cigarette advertisements were banned on radio and television. The adverse health consequences of environmental tobacco smoke (ETS) on nonsmokers were first officially addressed in the 6th Surgeon General's Report on smoking in 1972. In that same year, Congress passed legislation requiring health warnings on tobacco advertisements.

In 1973, Arizona passed the first comprehensive law since the early 1800's banning smoking in public places. On January 7, 1974, Monticello, Minnesota decided to go non-smoking for a day. The state of Minnesota began participating in an annual non-smoking day event by November 1974. Ultimately the event became national and in 1977 the first Great American Smokeout took place. Meanwhile, in 1975 the US military had finally ceased placing free cigarettes in rations. Despite the increasing awareness in the US of the deleterious health effects of smoking, the 1974 US Trade Act contained provisions to force Asian markets to open up to US tobacco companies' products and advertising. This act and continuing World Trade Organization multilateral agreements have led to a global increase in cigarette consumption almost entirely confined to developing countries. The World Health Organization (WHO) sponsored the first World No-Tobacco Day on April 7, 1988.

A trickle of individual lawsuits against tobacco companies in the 1970's and 1980's became a flood of litigation in the 1990's. In an attempt to staunch the increasing number of suits, the tobacco industry attacked the legitimacy of the charges citing the warning labels. However, in 1992, the US Supreme Court ruled that the 1965 warning label law does not shield tobacco companies from suits accusing them of deceiving the public about the health effects of smoking. In February 1994, then Food and Drug Administration (FDA) commissioner David Kessler announced plans to consider regulation of tobacco as a drug. By April 1994, seven tobacco company executives began testimony in televised congressional hearings. In May 1994, Mississippi became the first state to sue tobacco companies to recoup healthcare costs associated with smoking. In 1996, the Liggett Group, in a dramatic break from the rest of the tobacco industry, settled with five states over Medicaid lawsuits. In March 1997, Liggett Tobacco admitted publicly that smoking is addictive and causes multiple health problems including cancer. Liggett settled lawsuits that month with 22 states. Ultimately, litigation by the attorneys general of 46 states (including Indiana) resulted in the November 23, 1998 Master Settlement Agreement (MSA) with four of the largest tobacco companies: Phillip Morris, R. J. Reynolds, Brown & Williamson, and Lorillard. More than 30 additional manufacturers have by provisions of the agreement become signatories to the settlement. Four states, Minnesota, Mississippi, Florida, and Texas, settled their suits individually with the manufacturers.

While the settlement did provide compensation for the excess costs incurred by the states for the treatment of tobacco-related illnesses, it is important to remember that it ended neither tobacco sales nor tobacco advertisements. In fact, a number of states have had to resort to litigation in order to gain enforcement of the restrictions on advertisement and distribution of cigarettes by tobacco manufacturers agreed to in the settlement.

The initial statements of the MSA express a clear expectation that the funds received by the states will be used for public health measures including tobacco use prevention and cessation. Despite this expectation, Indiana was unique in committing 100% of its national settlement distribution for health purposes. Unfortunately, the budget woes Indiana is experiencing have already threatened this commitment. For 2002, Indiana decreased funding for tobacco prevention from $35 million to $32.5 million, and no longer meets the CDC's minimum funding

recommendation for tobacco prevention. In March 2002, the deficit management plan included a transfer of $60 million from the Tobacco Fund appropriations to the General Fund, and on December 3, 2002, the Indiana Budget Agency transferred $10.6 million from the Indiana Tobacco Use Prevention and Cessation Trust Fund. The Budget Agency also informed the Indiana Tobacco Prevention and Cessation Agency (ITPC) that an additional $10 million of its 2003 appropriation of $25 million will not be received. This will leave the ITPC with insufficient funds to continue operation unless funding can be restored.

The $32.5 million for tobacco prevention and the approximately $44 million for health care appropriated from the Tobacco Settlement funds may sound like a lot of money, but it pales beside the $1.62 billion annual health care costs in Indiana directly caused by tobacco use. Hospital charges alone for Indiana's 3,436 admissions in 1999 for lung cancer were $56 million, and this figure does not include physician's charges or charges for outpatient care.

Effects of Smoking on Health

Tobacco use is the primary or major cause of more than a dozen different diseases. In addition, smoking exacerbates or increases many other diseases. Cigarette smoking directly causes approximately 90% of lung cancers in men and 80% in women. There are about 4,270 new cases of lung cancer diagnosed each year in Indiana, an incidence rate of 73.5 per 100,000 Indiana residents. Each year, about 3,800 people in Indiana die of lung cancer, a mortality rate of 65.6 per 100,000. Tobacco use is the major cause of cancers of the head and neck, including cancers of the lip, tongue, mouth, salivary glands, pharynx, larynx, trachea, and esophagus. Cigarette smoking accounts for between 40% and 70% of bladder cancers and approximately 30% of pancreatic cancers. Bladder cancer is the fourth leading cause of cancer death for men in Indiana. Within the past decade, evidence has accumulated indicating that as many as 31% of the deaths from cervical cancer are due to smoking.

Malignancies are not the only group of diseases for which tobacco smoking is a major risk or aggravating factor. Cigarette smoking directly causes almost all cases of chronic obstructive pulmonary disease (COPD), which includes emphysema and chronic bronchitis. COPD is the fourth leading cause of death for Indiana residents, with over 3,000 deaths each year. Smoking also aggravates asthma. About 7.5% of the adults (18 or over) in Indiana currently have asthma, an estimated 339,120 adult asthmatics. There are an estimated 307,540 asthmatic children in Indiana (almost 20% of the population under 18). Former or current smokers have been reported to have more than double the risk of death from asthma of nonsmokers. The financial burden of these diseases is substantial. Indiana 1999 inpatient hospital charges for COPD and asthma were approximately $182 million. This figure does not include outpatient costs. In Indiana, an estimated 420,000 children are exposed to secondhand smoke at home. Children whose parents smoke are more likely to develop asthma and have a greater severity of asthma than children from nonsmoking households. The asthmatic children of smokers require more medicines and more trips to the hospital to resolve their asthma.

Tobacco use is a major risk factor for cardiovascular diseases. Smoking more than doubles the risk of having a heart attack, even for those smoking only 1 or 2 cigarettes per day. Smoking also increases the risk of stroke about three-fold. One fourth of all strokes can be directly attributed to cigarette smoking. Risk increases with the number of cigarettes smoked. The increased risk for cardiovascular diseases is independent of other risk factors. For example, smoking increases the risk of death from cardiovascular disease for men with cholesterol levels at the lower end of the normal range, just as it does for those with high cholesterol. The increased risk of cardiovascular diseases applies to both men and women, though women have been found to have an even higher risk due to smoking than men do. Increased risk from smoking has been found for all races and in widely varying cultures. Smoking increases the risk for subsequent heart attacks and strokes in those who continue to smoke after a first attack. However, smoking cessation can lower the risk of new attacks to the level of non-smokers within just 2 to 3 years. The benefit of quitting has been found in those with many different types of cardiovascular diseases including heart attack, stroke, and heart failure.

Cardiovascular diseases are the leading cause of death in Indiana, in the United States, and in most developed countries. In Indiana, the 2000 annual Behavioral Risk Factor Survey found that approximately 5.1% of adults (nearly 230,000 people) have had a heart attack and 2.5% or 112,650 people have had a stroke. In 2000, there were 16,140 deaths from heart disease among Indiana residents. In addition, there were 4,212 deaths from cerebrovascular diseases, mainly stroke. In 2000, the Indiana mortality rates for heart disease (271.15/ 100,000 Indiana residents) and stroke (70.92/ 100,000) were higher than rates for those diseases in the US as a whole (258.2/ 100,000 population and 60.9/100,000 respectively). In 1999, there were 120,902 in-state hospital discharges of Indiana residents for major cardiovascular diseases, with total charges of almost $1.8 billion.

Approximately one of every five pregnant women in Indiana smokes during the pregnancy. In Indiana, women who smoke during pregnancy have more than twice the risk of having a low birth weight baby than do those who do not smoke. Smoking during pregnancy also increases the risk to the baby of Sudden Infant Death Syndrome (SIDS), as well as increasing the risk of miscarriage, preterm delivery, and stillbirth. Other reproductive problems for female smokers include decreased fertility and an earlier age at menopause. Smoking also impairs sperm motility, alters sperm shape, and decreases sperm count, thus, it may decrease male fertility. In addition, smoking increases the risk of impotence.

Smoking is associated with a wide variety of other diseases and adverse health effects. Perhaps among the most easily understood health problems due to smoking are the effects on oral health. Most smokers are aware that smoking causes staining of the teeth and bad breath. The effects of smoking go beyond these cosmetic damages to include changes in saliva production, increased deposition of plaque, decreased blood supply to the gums, tissue damage from the high temperature maintained in the mouth while smoking, and even loss of alveolar bone ("tooth socket") height. As a result of these changes, smokers are far more likely than are non-smokers to lose teeth and to have serious infections, which may respond poorly to oral surgery. There is also the greatly increased risk of oral cancers. Oral health problems may progress unnoticed in the estimated 34% of Indiana adults who do not have routine dental exams.

Further adverse effects of smoking include an increased risk of loss of vision. Among the eye diseases, which can be caused or worsened by smoking, are cataracts, macular degeneration, diabetic retinopathy, and anterior ischemic optic neuropathy. There is also evidence that smokers have an increased risk for hearing loss.

Smoking is also a major risk factor for osteoporosis, placing smokers at a higher risk for bone fractures than are nonsmokers. Fractures in smokers take longer to heal, in part due to decreased blood flow and oxygen delivery to the wound. Delayed wound healing is also evident in smokers undergoing surgery. In addition, smokers have a six-fold increase in postoperative respiratory complications.

Smoking has powerful effects upon the brain and the rest of the nervous system. Nicotine readily crosses the blood-brain barrier. Nicotine is responsible for the combination of muscle relaxation and mental alertness many smokers seek, but is also responsible for the addictive nature of cigarettes and other tobacco products. Smoking may improve the symptoms of a few neurological diseases, most notably Parkinson's Disease, but its harms clearly outweigh the benefits of its use for this purpose. Smoking also worsens chronic neurological diseases, including multiple sclerosis.

Smoking and Indiana Youth

Despite the availability of information about the adverse health effects of smoking and other tobacco use, in Indiana alone, an estimated 20,500 children become new daily smokers each year. The Indiana Youth Tobacco Survey conducted in the fall of 2000 found that nearly 10% of middle school students and 31.6% of high school students are current cigarette smokers. Smoking in Indiana frequently begins very early. More than one of every four middle school students and one of every six high school students first smoked a cigarette before age 11. In addition, 10% of middle school students and 20% of high school students in Indiana have used chewing tobacco, snuff, or dip. In Indiana, 42% to 49% of students in grades 6 through 12 live with someone who smokes. In

middle school, 22% of students have one or more close friends who smoke, and by high school that percentage is 52%. Almost half of middle school students and 60% of high school students ride in cars with people who are smoking cigarettes. Peer pressure, parental role models, the perception of smokers as "cool" and having more friends than nonsmokers, the frequent images of television and movie actors smoking cigarettes, and cigarette advertisements featuring athletes all influence Indiana youth to begin smoking.

It will take a concerted effort to decrease the burden of tobacco on the citizens of Indiana. Increases in cigarette taxes have been shown to decrease the number of young people who begin smoking. Effective enforcement of laws prohibiting the sale of tobacco to youth under 18 can also help decrease middle and high school smoking. The dangers of environmental tobacco smoke first highlighted in a report by the US Surgeon General over 30 years ago suggest that adult smokers should refrain from smoking in the presence of children. Support for smoke free environments will reduce the burden of smoking for both smokers and nonsmokers.

Influenza-Associated Acute Encephalopathy In Children

Shawn Richards, BS
ISDH Communicable Disease

The Centers for Disease Control and Prevention (CDC) has requested information on influenza-associated acute encephalopathy in children. Since the mid-1990s, several hundreds of cases of acute encephalopathy have been reported in Japanese children with influenza virus infection. These cases have been characterized by fever, rapid onset of encephalopathy, high frequency of neurological sequelae and mortality. Most of the infected children have had laboratory-confirmed evidence of influenza.

To determine if a similar pattern of influenza-associated encephalopathy cases is occurring in the United States, the CDC is requesting information on any case meeting the following criteria.

An individual <18 years old with **ALL** of the following:

1. Altered mental status, or personality change, lasting >24 hours, occurring within five days of the onset of an acute febrile respiratory illness
2. Laboratory rapid diagnostic test evidence of acute influenza virus infection associated with the respiratory illness
3. Diagnosed in the United States

Please report any cases that have occurred after December 31,1997, to Shawn Richards at the Indiana State Department of Health by calling (317) 233-7740, or by e-mail at srichard@isdh.state.in.us. The information will be provided and forwarded to the CDC to determine if additional investigation is warranted.

OUTBREAK SPOTLIGHT….

"Outbreak Spotlight" is a regularly appearing feature in the *Indiana Epidemiology Newsletter* to illustrate the importance of various aspects of outbreak investigation. The event described below is an example of a propagated outbreak, and highlights how closed populations can serve as "sentinels" for health events in a community.

It Just Keeps Going, and Going, and Going . . . .

Outbreak of Viral Gastroenteritis in a Long Term Care Facility

Background

On February 21, 2002, a representative of the County X Health Department notified the Indiana State Department of Health (ISDH) that several residents at Facility A had developed symptoms of gastroenteritis, characterized primarily by diarrhea and vomiting, since mid-January. Facility A is a comprehensive care facility that includes approximately 175 residents throughout several wards and approximately 210 staff.

Epidemiologic Investigation

The ISDH and the County X Health Department (CXHD) conducted a collaborative investigation of this outbreak. The ISDH developed a questionnaire that documented illness history on the days in question. The CXHD conducted resident medical record reviews and distributed the questionnaire to staff members who also reported ill. Completed questionnaires were returned to the ISDH Epidemiology Resource Center for analysis. A case was defined as any previously healthy person who became ill with diarrhea and/or vomiting on or after January 15. Any person who was ill for any other reason or who became ill with symptoms that did not include diarrhea or vomiting was not considered as a case.

Approximately 39 residents and 38 staff members were reported ill. Thirty-eight residents and 34 staff members met the case definition. Symptoms reported by the 72 cases included diarrhea (94%), nausea (84%), vomiting (80%), abdominal cramps (55%), body aches (52%), and fever (50%; median: 100.5°F; range: 99.0°F to 102.0°F). Other symptoms included headache and chills. The median duration of illness was 22.0 hours, with a range of 5.5 hours to 111.5 hours. Eight residents and five employees sought medical attention, but no one was hospitalized overnight. A representative from CXHD delivered stool collection containers, and ten residents submitted stool specimens for laboratory analysis (see "Laboratory Results"). The median incubation period of illness was undetermined.

Environmental Assessment

Facility A reported conducting in-service training on hand washing on February 21 and 22 and restricted employees from "floating" between wards on February 21. All ill residents were confined to their rooms. A representative from the CXHD visited the facility on February 22 to review infection control practices. All activities were curtailed, and the beauty parlor was closed. All residents, regardless of illness status, were confined to their rooms.

During the same day, a representative from CXHD inspected the food preparation area. No violations were noted. Patients were served meals in their rooms rather than in the common dining areas. Food temperatures measured within the proper range, and the two-hand washing sinks were functioning properly. Sanitizer levels measured within proper range, sanitizing logs had been properly maintained throughout the month, and wiping cloths were used with sanitizing solution. Refrigeration equipment was clean and working properly. The dietary staff was instructed to continue to enforce hand-washing practices, monitor sanitizing procedures with utensils, equipment, and wiping cloths, and exclude any ill employees.

Cases continued to be reported. On February 23, a representative of the ISDH visited the facility to review infection control practices. The surveyor verified that all residents in the facility were restricted to their rooms. Meals were served in residents' rooms and the beauty shop was closed. No federal deficiencies or state violations were noted.

Additional cases were still identified. A representative from CXHD visited the facility on February 27 to review the situation. The facility appeared clean, restrooms were clean, and residents were dressed and ambulatory. Residents were still confined to their units and served meals in their units. Staff members were eating in the dining rooms. Hand washing signage was posted, and visitors were encouraged to wash hands. Employees were furnished with an alcohol-based hand gel for individual use. Applesauce used in administering medications was portioned into covered containers and served with individual spoons. The housekeeping staff continued disinfecting common areas. A hand washing in-service presented by the CXHD health educator was scheduled for the following week.

Since staff members continued to report illness, a hand washing in-service training was scheduled for all staff on March 1. Managers were required to complete a test on information regarding viral gastroenteritis. They also continued to enforce hand washing with employees and supervise residents washing their hands. The CXHD notified employees that dining and activity restrictions could not be lifted until no new cases were reported for four consecutive days.

On March 11, the CXHD health educator provided hand washing in-service training for all residents and 70 employees. On March 12, the director of nursing at the facility reported to the CXHD that no residents had been reported ill for the last week, and no employees had reported ill for the last four days. At that time, the outbreak was declared over.

Laboratory Results

Ten residents submitted stool specimens to the ISDH Laboratories for analysis. All specimens tested negative for *Salmonella, Shigella, Campylobacter* and *E. coli* O157:H7. Four of the ten specimens tested positive for Norwalk-like virus (now renamed as Norovirus).

Conclusions

This investigation confirms that an outbreak of gastroenteritis occurred among residents and staff at Facility A from January 30-March 1. The only consistent common exposure among the cases during this time was association with Facility A.

The causative agent of this outbreak was Norwalk-like virus. The symptoms experienced (diarrhea, nausea and vomiting) are typical of viral outbreaks. Viral pathogens generally have an incubation period ranging from 24 to 48 hours and duration of symptoms ranging from 12 to 60 hours. The median duration of illness reported was 22.0 hours. Most common bacterial agents of gastroenteritis generally have either a shorter incubation period (i.e., *Bacillus cereus*, *Staphylococcus aureus*, or *Clostridium perfringens*) or a longer duration of symptoms (i.e., *Campylobacter*, *Salmonella*, *Shigella*, or *E. coli* O157:H7). Although six specimens tested negative for viral pathogens, it is possible that those residents were no longer shedding virus at the time of specimen collection. The incubation period for this outbreak was not determined.

Viral agents of gastroenteritis are found only in humans and are shed through stool. Foodborne viral outbreaks usually occur when an infected food handler with inadequately washed hands prepares food that is served raw (i.e., salads, vegetables, etc.) or that is handled extensively after cooking (i.e., sliced sandwich meats, rolls, etc.). In addition, viral gastroenteritis is also easily transmitted person-to-person, and viral agents can be shed up to two weeks after symptoms cease.

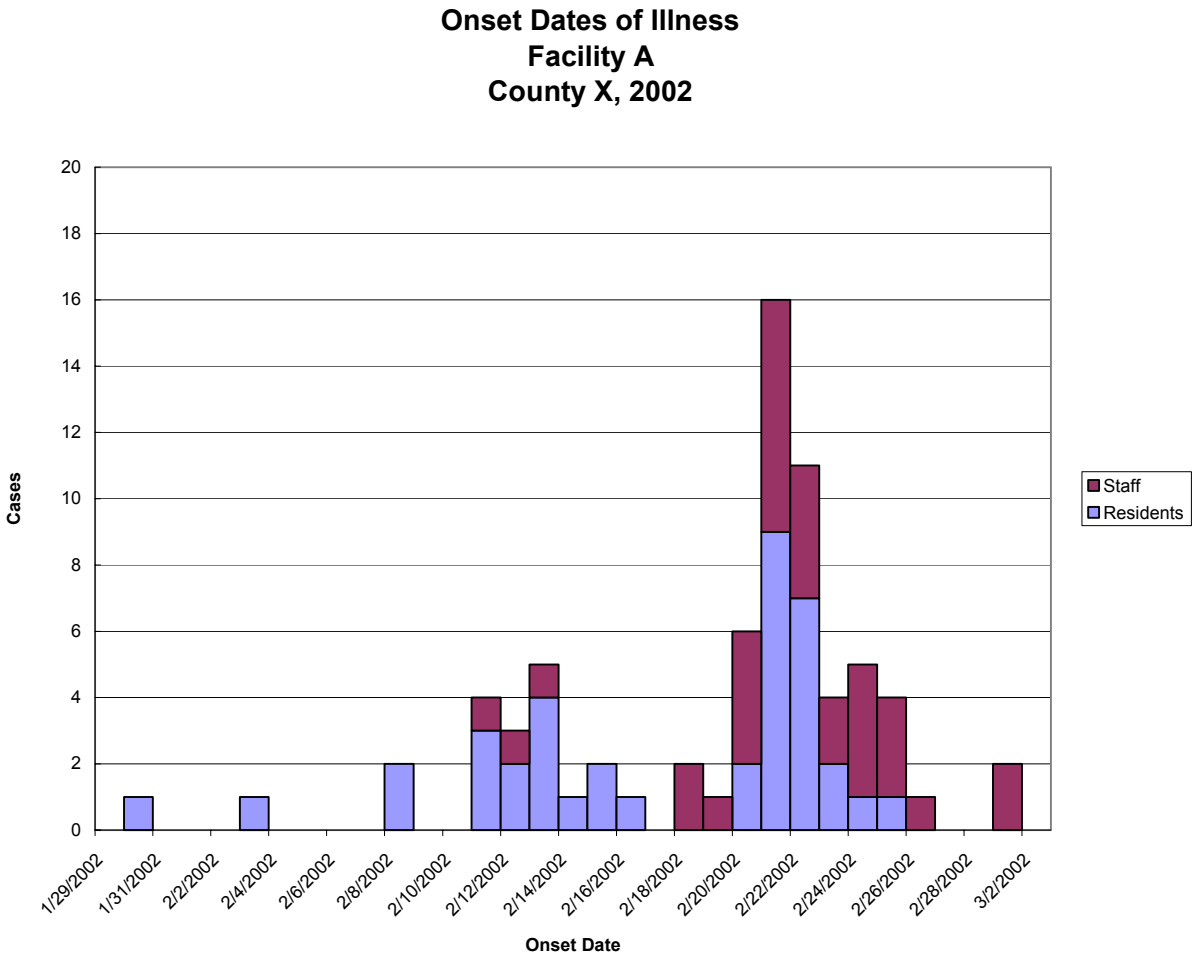
The epidemic curve (see figure 1) depicting the onset dates of cases indicates that this outbreak was most likely transmitted person to person. In point-source outbreaks, including foodborne, many cases become ill simultaneously shortly after one particular exposure, such as a contaminated food item, and resolve rather quickly. In addition, the one dietary staff member reported ill had an onset date during the outbreak, rather than before the outbreak, and no violations were noted in the food preparation area. In propagated outbreaks, including person-to-person, cases become ill at different times, usually in "waves", resulting from exposure to more than one source. These "waves" of illness are generally separated by one incubation period of the agent, and transmission may occur throughout different areas of a facility. This is the type of pattern observed.

Illness may have been introduced into the facility by an asymptomatic person or unidentified symptomatic person, such as a visitor. At least two staff members reported having contact with ill family members before becoming ill themselves. This would indicate that a similar infection was circulating in the community during this time. Due to the infectious nature of these viral agents and the typically short incubation period, infection can spread rapidly among residents and staff in a closed population, despite stringent control measures. Apparent outbreaks of diarrheal illness in institutional settings should be reported to the local health department as soon as possible. This allows the causative agent to be identified and control measures to be implemented quickly. These investigations also allow Indiana public health professionals to gain more information about viral agents of gastroenteritis, such as seasonal occurrence, frequency of infection, circulation within a community, and the burden of illness in elderly and/or compromised populations.

In general, most person-to-person viral outbreaks of gastroenteritis in institutional settings can be prevented by strictly adhering to the following practices:

1. Thoroughly wash hands with soap and water before preparing food, before eating, after using the restroom, after assisting someone to use the restroom, and cleaning soiled areas.
2. Thoroughly wash hands with soap and water after caring for people ill with diarrhea and vomiting.
3. Exclude employees from working while ill with diarrhea and/or vomiting until symptoms have ceased.
4. Thoroughly disinfect common use areas, such as handrails, doorknobs, and restrooms, using an approved disinfectant.
5. Restrict ill residents from common areas, such as dining rooms and activity sites.

Figure 1.


Onset Dates of Illness
Facility A
County X, 2002
Cases
20
18
16
14
12
10
8
6
4
2
0
1/29/2002
1/31/2002
2/2/2002
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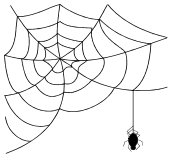
Residents



Wonderful Wide Web Sites

ISDH Data Reports Available

The ISDH Epidemiology Resource Center has the following data reports and the Indiana Epidemiology Newsletter available on the ISDH Web Page:

http://www.statehealth.IN.gov (under Data and Statistics)

Indiana Cancer Incidence Report (1990, 95,96)

Indiana Cancer Mortality Report (1990-94, 1992-96)

Indiana Health Behavior Risk Factors (1995-96, 97, 98, 99, 2000, 2001)

Indiana Hospital Consumer Guide (1996)

Indiana Marriage Report (1995, 97, 2000)

Indiana Maternal & Child Health Outcomes & Performance Measures (1988-97, 1989-98, 1990-99)

Indiana Mortality Report (1999, 2000)

Indiana Natality Report (1995, 96, 97, 2000)

Indiana Induced Termination of Pregnancy Report (2000)

Indiana Natality/Induced Termination of Pregnancy/Marriage Report (1998, 1999)

Indiana Report of Diseases of Public Health Interest (1996, 97, 98, 99)

HIV Disease Summary

Information as of January 31, 2003 (based on 2000 population of 6,080,485)

HIV - without AIDS to date:

446	New HIV cases from February 2002 through January 2003	12-month incidence	7.34 cases/100,000
3,678	Total HIV-positive, alive and without AIDS on January 31, 2003	Point prevalence	60.49 cases/100,000

AIDS cases to date:

489	New AIDS cases February 2002 through January 2003	12-month incidence	8.04 cases/100,000
3,255	Total AIDS cases, alive on January 31, 2003	Point prevalence	53.54 cases/100,000
6,964	Total AIDS cases, cumulative (alive and dead)		

REPORTED CASES of selected notifiable diseases

Disease	Cases Reported in January	
	MMWR Weeks 1-4	MMWR *Weeks 1-5*
	2002	2003
Campylobacteriosis	3	12
Chlamydia	1,024	835
Invasive Drug Resistant *S. pneumoniae* (DRSP)	5	0
E. coli O157:H7	1	0
Hepatitis A	1	1
Hepatitis B	0	0
Gonorrhea	507	280
Legionellosis	0	0
Lyme Disease	0	0
Meningococcal, invasive	0	4
Pertussis	0	0
Rocky Mountain Spotted Fever	0	0
Salmonellosis	9	13
Shigellosis	3	5
Primary and Secondary Syphilis	8	0
Tuberculosis	9	11
Animal Rabies	1 (bat)	0

For information on reporting of communicable diseases in Indiana, call the ISDH Communicable Disease Division at (317) 233-7665

Note: Due to the way the calendar falls in 2003 and the ending of MMWR weeks as defined by CDC, data for an extra week is recorded in January 2003.

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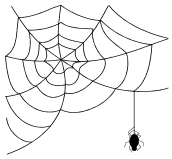

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www.in.gov/isdh/dataandstats/epidem/epinews_index.htm

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